2. Destination

Program Name: Destination.java Input File: destination.dat

You are helping blindfolded people reach their destination by telling them if they pass over their destination. You will be told the person's initial location and final location, and then be given a list of their movements. State how many moves it took for them to pass over or land at their destination or "You didn't make it" (including the quotation marks) if they never make it to their destination. Movements will take the form of "(Direction) (Distance)" where direction is north, south, east, or west. If a person starts on their destination, the answer is 0. North is +Y, South: -Y, East: +X, and West: -X.

Input

The first line will contain 't' the number of test cases to follow. The first line will contain 5 numbers "X1 Y1 X2 Y2 N" where (X1, Y1) is the starting location and (X2, Y2) is the destination location, and N is the number of directions to follow with each direction on its own line. All numbers will be integers.

Output

How many moves it took to pass over the destination or "You didn't make it"

Constraints

```
1 <= t < 10
-100 <= X1,Y1,X2,Y2 <= 100
Direction : {north, east, south, west}
0 < Distance < 30
0 < N < 30
```

Example Input File

```
2
0 0 2 4 3
west 3
north 4
east 9
1 2 4 6 2
south 3
east 1
```

Example Output to Screen

```
3
You didn't make it
```

Explanation

On the first test case the person traveled from (0,0) to (-3,0) to (-3,4) to (6,4). On the third move, the person passes over (2,4) when passing from (-3,4) to (6,4).

On the second case the person moves from (1,2) to (1,-1) to (2,-1) but never passes over (4,6).